

Linzer biol. Beitr.	44/2	1215-1220	28.12.2012
---------------------	------	-----------	------------

Notes on Lucanidae of the Republic of Seychelles (Coleoptera: Scarabaeoidea)

M. MADL & P. MATYOT

A b s t r a c t : In the Republic of Seychelles the family Lucanidae is represented by two genera and four species. Three species are known only from Inner Seychelles (or Seychelles proper) and one species from Aldabra. New collecting data on *Aegus chelififer* MACLEAY 1819 and *Figulus magnus* BENESH 1955 are presented. A key to the species is proposed.

Key words : Lucanidae, *Aegus*, *Figulus*, catalogue, new records, Seychelles.

Introduction

The islands of the Malagasy Subregion excluding Madagascar have a depauperate stag beetle fauna with only few species, but with several endemic ones. The highest number of species (five) is known from Mauritius (GOMY (2000: 57)). There are no records of Lucanidae from the coralline islands in the western Indian Ocean except Aldabra.

During our study of the Hymenoptera of the Inner Seychelles or Seychelles proper some specimens of stag beetles have been collected on Mahé, the main island. The material, which is deposited in the Naturhistorisches Museum in Vienna, contains only two species, *Aegus chelififer* MACLEAY 1819 and *Figulus magnus* BENESH 1955. In addition, references is made to a specimen of *Figulus seychellensis* SCOTT 1912 found on Silhouette in 1990.

We have also updated the catalogue of the Seychellean Lucanidae recently published by GERLACH (2009a). Papers and books, which were not available at the libraries of the Naturhistorischens Museum in Vienna, are listed in the chapter References and are indicated "not seen".

Key to the species of Lucanidae in the Republic of Seychelles

- 1 Pronotum without longitudinal medial groove, coarsely and densely punctured; elytral width at least 8 mm*Aegus chelififer*
- Pronotum with longitudinal medial groove, shiny and smooth; elytral width at most 8 mm 2
- 2 Antennae with nine segments.....*Figulus seychellensis*
- Antennae with ten segments.....3

- 3 Frons with small tubercle; sides of pronotum with fine punctures; mandibles as long as head. Inner Seychelles.....*Figulus magnus*
- Frons without tubercle; sides of pronotum with coarse punctures; mandibles shorter than head. Aldabra*Figulus striatus*

Annotated Catalogue

Subfamily D o r c i n a e

Aegus chelifer MACLEAY 1819

Aegus chelifer MACLEAY 1819: CARPANETO et al. 2010: 174 (biol., Mahé, Cerf, Ile du Nord, Praslin, La Digue), 175 (fig. 1), 176 (fig. 2), 177 (tax., biol.).

M a t e r i a l e x a m i n e d : Mahé: Victoria, Hermitage 1 ♂ 23.5.2003 leg. P. Matyot – Victoria, La Rosière 2 ♀ ♀ Decembre 2003 leg. P. Matyot – Anse aux Pins, La Roussette 1 ♀ 10.5.2003, 1 ♀ 22.3.2011 leg. M. Madl.

D i s t r i b u t i o n : Inner Seychelles: Mahé, Cerf, Ile du Nord, Praslin, La Digue.

Aegus chelifer is widely distributed in the Oriental Region. This species arrived in Seychelles probably some years before 2003. The hypothesis put forward by CARPANETO et al. (2010: 177), according to which the species may arrived in flotsam deposited by the December 2004 Indian Ocean tsunami is therefore not borne out. In the vicinity of Victoria on Mahé often lands near artificial lighting at night, especially after rain.

Subfamily F i g u l i n a e

Figulus magnus BENESH 1955

Figulus magnus n.sp.: BENESH 1955: 62 (descr., biol., Seychelles), 76 (fig. 8).

Figulus magnus BENESH 1955: BENESH 1960: 154 (cat.).

Figulus magnus BENESH 1955: MAES 1992: 39 (cat.).

Figulus magnus BENESH 1955: KRAJCIK 2001: 11 (cat.).

Figulus magnus BENESH 1955: KRAJCIK 2003: 79 (cat.).

Figulus magnus BENESH 1955: BARTOLOZZI & WERNER 2004: 31 (cat., fig. 33).

Figulus magnus BENESH 1955: GERLACH 2009a: 79 (key, tax., Silhouette).

Figulus magnus BENESH 1955: GERLACH 2009b: 219 (red list).

Figulus magnus BENESH 1955: MONTE & BARTALOZZI 2010: 2 (cat., key), 4 (tax., descr. ♂ ♀, biol., Mahé, Silhouette, Praslin), 5 (fig. 3), 6 (fig. 4).

Figulus magnus BENESH 1955: CARPANETO et al. 2010: 176 (cat.).

**Figulus striatus* (OLIVIER 1789): FAIRMAIRE 1893: 323 (Seychelles).

Figulus striatus (OLIVIER 1789): ALLUAUD 1900: 298 (Mahé).

Figulus striatus (OLIVIER 1789) (group A): SCOTT 1912: 218, 219, 221 (tax., biol., Mahé, Silhouette, Praslin).

Figulus striatus (OLIVIER 1789) (var. A): SCOTT 1933: 334 (tax., Seychelles).

Figulus striatus (OLIVIER 1789): DIDIER & SÉGUY 1953: 183 (cat. partim).

Figulus striatus (OLIVIER 1789): MIZUNUMA & NAGAI 1994: pl. 136 (figs. 647-1, 2), 300 (cat. partim).

Figulus striatus (OLIVIER 1789): GERLACH, MATYOT & SAARISTO 1997: 32 (cat. Silhouette).

Figulus striatus (OLIVIER 1789): GERLACH 2003: 20 (biol., Silhouette).

Figulus striatus (OLIVIER 1789): GERLACH 2009a: 79 (tax., Mahé, Silhouette, Praslin).

Figulus striatus (OLIVIER 1789): GERLACH 2009b: 219 (red list partim).

Host plant: Arecaceae: *Cocos nucifera* LINNAEUS 1753, *Lodoicea maldivica* (GMELIN 1791).

Material examined: Mahé: Victoria, Hermitage 1 ex. 15.8.2003 leg. P. Matyot.

Distribution: Inner Seychelles: Mahé, Silhouette, Praslin.

Endemic. The record from Seychelles by FAIRMAIRE (1893) is not cited in MARIE & LESNE (1917). *Figulus magnus* is not mentioned in MIZUNUMA & NAGAI (1994).

***Figulus seychellensis* SCOTT 1912**

Figulus seychellensis n.sp.: SCOTT 1912: 217 (tab.: distr.), 222 (descr., biol., Mahé, Silhouette).

Figulus seychellensis SCOTT 1912: SCOTT 1933: 337 (biol.).

Figulus seychellensis SCOTT 1912: DIDIER & SÉGUY 1953: 183 (cat.).

Figulus seychellensis SCOTT 1912: BENESH 1955: 60 (tax., Silhouette), 76 (figs. 1, 3).

Figulus seychellensis SCOTT 1912: BENESH 1960: 28 (cat.).

Figulus seychellensis SCOTT 1912: MAES 1992: 40 (cat.).

Figulus seychellensis SCOTT 1912: GERLACH, MATYOT & SAARISTO 1997: 32 (cat. Silhouette).

Figulus seychellensis SCOTT 1912: KRAJCIK 2001: 13 (cat.).

Figulus seychellensis SCOTT 1912: KRAJCIK 2003: 83 (cat.).

Figulus seychellensis SCOTT 1912: BARTOLOZZI & WERNER 2004: 35 (cat., figs. 37, 38).

Figulus (Figulinus) seychellensis SCOTT 1912: BOMANS 2007: 379 (tax.).

Figulus seychellensis SCOTT 1912: GERLACH 2009a: 79 (key, tax., Mahé, Silhouette).

Figulus seychellensis SCOTT 1912: GERLACH 2009b: 219 (red list).

Figulus seychellensis SCOTT 1912: MONTE & BARTALOZZI 2010: 2 (cat., key), 9 (tax., descr. ♂ ♀, fig. 6, biol., Silhouette), 10 (fig. 7).

Figulus seychellensis SCOTT 1912: CARPANETO et al. 2010: 176 (cat.).

**Figulus striatus braueri* n.ssp.: KRIESCHE 1922: 130 (descr., Mahe).

Figulus striatus var. *braueri* KRIESCHE 1922: DIDIER & SÉGUY 1953: 183 (cat.).

Figulus striatus var. *braueri* KRIESCHE 1922: BENESH 1960: 28 (syn. of *Figulus striatus*).

Figulus striatus braueri KRIESCHE 1922: KRAJCIK 2001: 13 (syn.).

Host plant: Dilleniaceae: *Dillenia ferruginea* (BAILLON 1865).

Material examined: Silhouette: crest above Jardin Marron 1 ex. July 1990 leg. P. Matyot & G. Floater

Distribution: Inner Seychelles: Mahé, Silhouette.

Endemic. This species is not mentioned in MIZUNUMA & NAGAI (1994). The specimen was collected in humus inside a hollow log.

***Figulus striatus* (OLIVIER 1789)**

Figulus striatus (OLIVIER 1789): KOLBE 1910: 22 (biol., Mahé).

Figulus striatus (OLIVIER 1789) (group B): SCOTT 1912: 217 (tab.: distr. partim), 220 (tax., Aldabra).

Figulus striatus (OLIVIER 1789) (var. B): SCOTT 1933: 334 (tax., Aldabra).

Figulus striatus (OLIVIER 1789): DIDIER & SÉGUY 1953: 183 (cat. partim).

Figulus striatus (OLIVIER 1789): MAES 1992: 41 (cat.).

Figulus striatus (OLIVIER 1789): MIZUNUMA & NAGAI 1994: pl. 136 (figs. 647-1, 2), 300 (cat.).

Figulus striatus (OLIVIER 1789): BARTOLOZZI & WERNER 2004: 36 (cat., figs. 39-41, Aldabra not mentioned).

Figulus striatus (OLIVIER 1789): GERLACH 2009a: 79 (Aldabra).

Figulus striatus (OLIVIER 1789): GERLACH 2009b: 219 (red list partim).

Figulus striatus (OLIVIER 1789): MONTE & BARTALOZZI 2010: 2 (cat., key), 11 (tax., descr. ♂ ♀, 12 (fig. 8), 13 (fig. 9).

Figulus striatus (OLIVIER 1789): CARPANETO et al. 2010: 176 (cat.).

D i s t r i b u t i o n : Aldabra Group: Aldabra.

Figulus striatus, an endemic species of the Malagasy Subregion, is also recorded from Madagascar, Réunion, Mauritius and Rodrigues.

Acknowledgements

The authors are indebted to Wolfgang Brunnbauer and Heinrich Schönmann (Naturhistorisches Museum Wien, Austria) for their support in searching references and the late Wilhelm Zelenka (Vienna, Austria) for his help in identifying material. We are especially grateful to Luca Bartolozzi (Museo di Storia Naturale dell'Università degli Studi di Firenze, "La Specola", Firenze, Italy) for sending copies of his papers and for his critical ideas concerning the first draft of the manuscript.

Zusammenfassung

Die Familie Lucanidae ist in der Republik der Seychellen mit zwei Gattungen und vier Arten vertreten. Drei Arten kommen nur auf den Seychellen (oder Inner Seychelles) vor und eine Art nur auf Aldabra. Funddaten von *Aegus chelififer* MACLEAY 1819 und *Figulus magnus* BENESH 1955 werden mitgeteilt. Ein Bestimmungsschlüssel zu den Arten wird vorgeschlagen.

References

The "Bulletin de la Société Entomologique de France" was published in two versions from 1873 to 1894 (EVENHUIS 2002). We have cited both versions (quarterly in brackets), but we have only seen the quarterly version.

- ALLUAUD Ch. (1893): Mission scientifique de Ch. ALLUAUD aux îles Séchelles (mars, avril, mai 1892). – Considérations générales. — Bulletin de la Société Entomologique de France **1893** (4): 97-99. (**1893** (2): 97-99.)
- ALLUAUD Ch. (1900): Liste des Insectes Coléoptères de la Région Malgache. — In: GRANDIDIER A. (ed.), Histoire Physique, Naturelle et Politique de Madagascar **XXI** (Histoire Naturelle des Coléoptères I (Texte)): V-VIII, 509 pp.
- BARTOLOZZI L. & H. WERNER (2004): Illustrated Catalogue of the Lucanidae from Africa and Madagascar. — Hradec Kralové (Taita Publishers): 189 pp.
- BENESH B. (1955): Some further notes on the stagbeetles with especial reference to Figulinae (Coleoptera, Lucanidae). — Transactions of the American Entomological Society **81**: 59-76.
- BENESH B. (1960): Lucanidea. — In: HINCKS W.D. (ed.), Coleopterorum Catalogus Supplementa **8**: 178 pp.
- BOMANS H.E. (2007): Note sur les genre *Figulus* MACLEAY 1819. Creation d'un nouveau sous-genre (Coleoptera, Lucanidae) (107eme contribution à l'étude des Coléoptères Lucanides). — Lambillionea **107** (3) (Tome 2): 377-380. **not seen**
- CARPANETO G.M., BARTOLOZZI L., MAZZEI P., PIMPINELLI I. & V. VIGLIOGLIA (2010): *Aegus chelififer* MACLEAY 1819, an Asian stag beetle (Coleoptera Lucanidae) invading the Seychelles Islands: a threat for endemic saproxylic species. — Tropical Zoology **23** (2): 173-180.

- DIDIER R. & E. SÉGUY (1953): Catalogue illustré des Lucanides du Globe. Texte. — Encyclopédie Entomologique, Série A **27**: 223 pp.
- EVENHUIS N.L. (2002): Publication and dating of the two "Bulletins" of the Société Entomologique de France (1873-1894). — Zootaxa **70**: 32 pp.
- FAIRMAIRE L. (1893): Sur quelques Coléoptères de Séchelles. — Bulletin de la Société Entomologique de France **1893** (19): 322-325. (FAIRMAIRE L. (1894): Bulletin de la Société Entomologique de France **1893** (4): 322-325.)
- FUJITA H. (2010): The Lucanid Beetles of the World. — Mushi-Sha's Iconographic Series of Insects **6**: 472 pp., 248 pls. not seen
- GERLACH J. (2003): The biodiversity of the granitic islands of Seychelles. Indian Ocean Biodiversity Assessment 2000-2005. Biodiversity assessment celebrating the centenary of the Percy SLADEN Trust Expedition to the Indian Ocean. — Phelsuma **11** (Supplement B): 47 pp.
- GERLACH J. (2009a): Family Lucanidae. — In: GERLACH J. (ed.), The Coleoptera of the Seychelles islands: 79-80.
- GERLACH J. (2009b): Red listing. — In: GERLACH J. (ed.), The Coleoptera of the Seychelles islands: 210-240.
- GERLACH J., MATYOT P. & M. SAARISTO (1997): Silhouette species list. — Phelsuma **5** (supplement A): 42 pp. (unpaginated)
- GOMY Y. (2000): Nouvelle liste chorologique des Coléoptères de l'Archipel des Mascareignes. — Saint Denis (Société Réunionnais des Amis du Muséum): 140 pp.
- KOLBE H. (1910): Die Coleopterenfauna der Seychellen. Nebst Betrachtungen über die Tiergeographie dieser Inselgruppe. — Mitteilungen aus dem Zoologischen Museum in Berlin **5** (1): 1-44.
- KRAJCIK M. (2001): Lucanidae of the World. Catalogue – Part I. Checklist of the Stag Beetles of the World (Coleoptera: Lucanidae). — Most (Milan KRAJCIK): I-VI, 108 pp.
- KRAJCIK M. (2003): Lucanidae of the World. Catalogue – Part II. Encyclopedia of the Lucanidae (Coleoptera: Lucanidae). — Plcen (Milan KRAJCIK): I-II, 197 pp., 10 pls. **not seen**
- KRIESCHE R. (1922): Zur Kenntnis der Lucaniden. — Stettiner Entomologische Zeitung **83** (1-2): 115-137.
- MAES J.-M. (1992): Lista de los Lucanidae (Coleoptera) del Mundo. — Revista Nicaraguense de Entomologia **2** (A): 1-60; (B): 61-121.
- MARIE R. & P. LESNE (1917): Catalogue des Coléoptères de la région malgache décrits ou mentionnés par L. FAIRMAIRE (1849-1906). — Bulletin du Muséum National d'Histoire Naturelle **7** (Annexe): I-IV, 180 pp.
- MIZUNUMA T. & S. NAGAI (1994): The Lucanid Beetles of the World. — Mushi-Sha's Iconographic Series of Insects **1**: 338 pp.
- MONTE C. & L. BARTOLOZZI (2010): Revision of the African *Figulus* MACLEAY, 1819 from the Indian Ocean islands (Coleoptera, Lucanidae). — Entomologia Africana, Collection "Hors Série" **4**: 24 pp.
- NAKAMURA H. (1974): A preliminary check list of the stag beetles (Lucanidae, Coleoptera) from Africa. — Miscellaneous Publications of the Entomological Institute Yamanashi **3**: 1-10. **not seen**
- SCOTT H. (1912): Coleoptera, Lamellicornia and Adephaga. — Transactions of the Linnean Society of London, 2. series, Zoology **15** (2): 215-262, pl. 12.
- SCOTT H. (1933): General conclusions regarding the insect fauna of the Seychelles and adjacent islands. — Transactions of the Linnean Society of London, 2. series, Zoology **19** (3): 307-391.

Authors' addresses: Michael MADL
Internationales Institut für Entomologie
Naturhistorisches Museum
Burgring 7
A-1010 Wien, Austria
E-mail: michael.madl@nhm-wien.ac.at

Pat MATYOT
Seychelles Broadcasting Corporation
P.O. Box 323
Victoria, Mahé, Seychelles
E-mail: pat.matyot@sbc.sc

Table 1: Distribution of the the species in the Republic of Seychelles.

SPECIES	INNER SEYCHELLES						ALDABRA GROUP
	Mahé	Cerf	Silhouette	Ile du Nord	Praslin	La Digue	Aldabra
<i>Aegus chelififer nitidus</i>	•	•		•	•	•	
<i>Figulus magnus</i>	•		•		•		
<i>Figulus seychellensis</i>	•		•				
<i>Figulus striatus</i>							•